

## **AVOIDING DATA LOSS AND REDUCING REGISTRATION OVERHEAD IN PACKET NETWORKS**

### **ABSTRACT**

[1072] Techniques for avoiding data loss and reducing registration overhead in a wireless packet data communication system are disclosed. In one embodiment, a mobile station adds each connection to a connection list following registration with the PCF. The mobile station need not reregister a connection included in the connection list when it again enters the PCF's coverage area. In another embodiment, a PDSN maintains a connection table, with one or more connections for each mobile station. The PDSN transmits data to the mobile station along one of the connections. In yet another embodiment, a PDSN transmits on an active connection, if one exists. In yet another embodiment, connections in a connection list or connection table are removed when a corresponding inactivity timer expires. Various other embodiments are also presented. Benefits include allowing mobile stations to travel between PCFs without re-registering, which reduces registration overhead and increases system capacity, and avoidance of data loss from network initiated data directed to a mobile station, resulting in timely delivery of the data and reduction of system resources allocated to retransmission of data.